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### 1 [Non-cooperative uplink power control in cellular radio systems](#)

 Hongbin Ji, Ching-Yao Huang  
 March 1998 **Wireless Networks**, Volume 4 Issue 3

Publisher: Kluwer Academic Publishers

 Full text available: [pdf\(221.72 KB\)](#)

 Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

This paper presents uplink power control in cellular radio systems from an economic point of view. A utility function is defined for each mobile user, which reflects the user's preference regarding the carrier-to-interference ratio (CIR) and the transmitter power. We observe that, on one hand, mobile users prefer to transmit at a lower power for a fixed CIR. On the other hand, for a given transmitter power, users prefer to obtain a better CIR. Based on this observation, we make two fundamen ...

### 2 [Intrusion and privacy: Exploiting unlabeled data in ensemble methods](#)

Kristin P. Bennett, Ayhan Demiriz, Richard Maclin

 July 2002 **Proceedings of the eighth ACM SIGKDD international conference on Knowledge discovery and data mining KDD '02**

Publisher: ACM Press

 Full text available: [pdf\(719.46 KB\)](#)

 Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

An adaptive semi-supervised ensemble method, ASSEMBLE, is proposed that constructs classification ensembles based on both labeled and unlabeled data. ASSEMBLE alternates between assigning "pseudo-classes" to the unlabeled data using the existing ensemble and constructing the next base classifier using both the labeled and pseudolabeled data. Mathematically, this intuitive algorithm corresponds to maximizing the classification margin in hypothesis space as measured on both the labeled and unlabeled ...

**Keywords:** boosting, classification, ensemble learning, semi-supervised learning

### 3 [Topology and routing: On the marginal utility of network topology measurements](#)

Paul Barford, Azer Bestavros, John Byers, Mark Crovella

 November 2001 **Proceedings of the 1st ACM SIGCOMM Workshop on Internet Measurement IMW '01**

Publisher: ACM Press

 Full text available: [pdf\(2.40 MB\)](#)

 Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

The cost and complexity of deploying measurement infrastructure in the Internet for the purpose of analyzing its structure and behavior is considerable. Basic questions about the utility of increasing the number of measurements and measurement sites have not yet been addressed which has led to a "more is better" approach to wide-area measurement studies. In this paper, we step toward a more quantifiable understanding of the marginal utility of performing wide-area measurements in the co ...

**Keywords:** internet tomography, network measurement, topology discovery, traceroute

4 Internet intrusions: global characteristics and prevalence

Vinod Yegneswaran, Paul Barford, Johannes Ullrich

June 2003

**ACM SIGMETRICS Performance Evaluation Review , Proceedings of the 2003 ACM SIGMETRICS international conference on Measurement and modeling of computer systems SIGMETRICS '03, Volume 31 Issue 1**

Publisher: ACM Press

Full text available: pdf(699.44 KB)

Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

Network intrusions have been a fact of life in the Internet for many years. However, as is the case with many other types of Internet-wide phenomena, gaining insight into the *global* characteristics of intrusions is challenging. In this paper we address this problem by systematically analyzing a set of firewall logs collected over four months from over 1600 different networks world wide. The first part of our study is a general analysis focused on the issues of distribution, categorization ...

**Keywords:** internet performance and monitoring, network security, wide area measurement

5 Macintosh human interface guidelines

Apple Computer, Inc.

January 1992 Book

Publisher: Addison-Wesley Publishing Company

Full text available: pdf(37.61 MB)

Additional Information: [full citation](#), [abstract](#), [references](#), [cited by](#), [index terms](#)

Macintosh Human Interface Guidelines describes the way to create products that optimize the interaction between people and Macintosh computers. It explains the whys and hows of the Macintosh interface in general terms and specific details.

Macintosh Human Interface Guidelines helps you link the philosophy behind the Macintosh interface to the actual implementation of interface elements. Examples from a wide range of Macintosh products show good human interface design, including individ ...

6 The learning-curve sampling method applied to model-based clustering

Christopher Meek, Bo Thieson, David Heckerman

March 2002 **The Journal of Machine Learning Research**, Volume 2

Publisher: MIT Press

Full text available: pdf(236.85 KB)

Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

We examine the learning-curve sampling method, an approach for applying machine-learning algorithms to large data sets. The approach is based on the observation that the computational cost of learning a model increases as a function of the sample size of the training data, whereas the accuracy of a model has diminishing improvements as a function of sample size. Thus, the learning-curve sampling method monitors the increasing costs and performance as larger and larger amounts of data are used fo ...

**Keywords:** clustering, decision theory, learning-curve sampling method, sampling, scalability

7 Classics in software engineering

January 1979 Divisible Book

Publisher: Yourdon Press

Additional Information: [full citation](#), [cited by](#), [index terms](#)8 Variable-depth trie index optimization: theory and experimental results

R. Ramesh, A. J. G. Babu, J. Peter Kincaid

March 1989

**ACM Transactions on Database Systems (TODS)**, Volume 14 Issue 1

Publisher: ACM Press

Full text available: pdf(2.59 MB)

Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#), [review](#)

We develop an efficient approach to Trie index optimization. A Trie is a data structure used to index a file having a set of attributes as record identifiers. In the proposed methodology, a file is horizontally partitioned into subsets of records using a Trie index whose depth of

indexing is allowed to vary. The retrieval of a record from the file proceeds by "stepping through" the index to identify a subset of records in the file in which a binary search is per ...

9 Poster session: Utility-based decision-making in wireless sensor networks

John Byers, Gabriel Nasser

November 2000

**Proceedings of the 1st ACM international symposium on Mobile ad hoc networking & computing MobiHoc '00**

Publisher: IEEE Press

Full text available:  pdf(184.61 KB)

Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#)

We consider challenges associated with application domains in which a large number of distributed, networked sensors must perform a sensing task repeatedly over time. We address issues such as resource constraints, *utility* associated with a sensing task, and achieving global objectives with only local information. We present a model for such applications, in which we define appropriate global objectives based on utility functions and specify a cost model for energy consumption. In the ful ...


10 Static correlated branch prediction

Cliff Young, Michael D. Smith

September 1999

**ACM Transactions on Programming Languages and Systems (TOPLAS), Volume 21 Issue 5**

Publisher: ACM Press

Full text available:  pdf(508.49 KB)

Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

Recent work in history-based branch prediction uses novel hardware structures to capture branch correlation and increase branch prediction accuracy. Branch correlation occurs when the outcome of a conditional branch can be accurately predicted by observing the outcomes of previously executed branches in the dynamic instruction stream. In this article, we show how to instrument a program so that it is practical to collect run-time statistics that indicate where branch correl ...

**Keywords:** branch correlation, branch prediction, path profiling, profile-driven optimization


11 Final report of the GSPC state-of-the-art subcommittee

R. H. Ewald, R. Fryer

June 1978

**ACM SIGGRAPH Computer Graphics, Volume 12 Issue 1-2**

Publisher: ACM Press

Full text available:  pdf(7.85 MB)

Additional Information: [full citation](#), [abstract](#)

This paper presents the final report of the ACM/SIGGRAPH Graphics Standards Planning Committee (GSPC) State-of-the-Art Subcommittee. This group's charter was to compare existing vector-oriented graphics packages to determine their similarities and differences. Eight graphics packages and the GSPC "Core System" were selected for review.


12 Approximately-strategyproof and tractable multi-unit auctions

Anshul Kothar, David C. Parke, Subhash Sur

June 2003

**Proceedings of the 4th ACM conference on Electronic commerce EC '03**

Publisher: ACM Press

Full text available:  pdf(302.85 KB)

Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

We present an approximately-efficient and approximately-strategyproof auction mechanism for a single-good multi-unit allocation problem. The bidding language in our auctions allows marginal-decreasing piecewise constant curves. First, we develop a fully polynomial-time approximation scheme for the multi-unit allocation problem, which computes a  $(1+\epsilon)\approx$  in worst-case time  $T = O(n^3/\epsilon)$ , given  $n$  bids each with a constant number of pieces. Second, we embed this approximation ...

**Keywords:** approximation algorithm, multi-unit auctions, strategyproof

13 Traffic matrix estimation: existing techniques and new directions

A. Medina, N. Taft, K. Salamatian, S. Bhattacharyya, C. Diot

August 2002

**ACM SIGCOMM Computer Communication Review, Proceedings of the 2002 conference on Applications, technologies, architectures, and protocols for**

**computer communications SIGCOMM '02**, Volume 32 Issue 4

Publisher: ACM Press

Full text available:  pdf(433.57 KB)Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

Very few techniques have been proposed for estimating traffic matrices in the context of Internet traffic. Our work on POP-to-POP traffic matrices (TM) makes two contributions. The primary contribution is the outcome of a detailed comparative evaluation of the three existing techniques. We evaluate these methods with respect to the estimation errors yielded, sensitivity to prior information required and sensitivity to the statistical assumptions they make. We study the impact of characteristics ...


**Keywords:** statistical inference, traffic matrix estimation

14 Algorithmic luckiness

Ralf Herbrich, Robert C. Williamson

March 2003 **The Journal of Machine Learning Research**, Volume 3

Publisher: MIT Press

Full text available:  pdf(487.22 KB)Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

Classical statistical learning theory studies the generalisation performance of machine learning algorithms rather indirectly. One of the main detours is that algorithms are studied in terms of the hypothesis class that they draw their hypotheses from. In this paper, motivated by the luckiness framework of Shawe-Taylor et al. (1998), we study learning algorithms more directly and in a way that allows us to exploit the serendipity of the training sample. The main difference to previous approaches ...

15 Essays in computing science

C. A. R. Hoare

January 1989 Book

Publisher: Prentice-Hall, Inc.

Full text available:  pdf(20.91 MB)Additional Information: [full citation](#), [abstract](#), [references](#), [cited by](#), [review](#)


Charles Antony Richard Hoare is one of the most productive and prolific computer scientists. This volume contains a selection of his published papers. There is a need, as in a Shakespearian Chorus, to offer some apology for what the book manifestly fails to achieve. It is not a complete 'collected works'. Selection between papers of this quality is not easy and, given the book's already considerable size, some difficult decisions as to what to omit have had to be made. Pity the editor weighin ...

16 Capacity planning for MVS computer systems

H. Pat Artis

December 1979 **ACM SIGMETRICS Performance Evaluation Review**, Volume 8 Issue 4

Publisher: ACM Press

Full text available:  pdf(1.46 MB)Additional Information: [full citation](#), [abstract](#), [references](#)

The current status of an implementation of a methodology relating load, capacity and service for IBM MVS computer systems is presented. This methodology encompasses systems whose workloads include batch, time sharing and transaction processing. The implementation includes workload classification, mix representation and analysis, automatic benchmarking, and exhaust point forecasting.


17 Memory size estimation for multimedia applications

Peter Grun, Florin Balasa, Nikil Dutt

March 1998 **Proceedings of the 6th international workshop on Hardware/software codesign CODES/CASHE '98**

Publisher: IEEE Computer Society

Full text available:

 pdf(39.59 KB)Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#)[Publisher Site](#)18 A dynamic mechanism for time-constrained trading

Samuel P. M. Choi, Jiming Liu

May 2001 **Proceedings of the fifth international conference on Autonomous agents AGENTS '01**

Publisher: ACM Press

Full text available:  pdf(237.98 KB)Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

The market mechanism design is important for both conventional and electronic commerce as it affects the fairness and efficiency of trading. In this paper, we propose a new market mechanism for time- constrained trading. Our mechanism mimics the traditional brokering system, where buyers and sellers meet together and negotiate through an electronic marketplace. At each time step, agents are paired up for negotiating a deal. We consider that buyer and seller agents are associated with a time ...

**Keywords:** Markov decision processes, electronic commerce system, market mechanism design, middle agent, multiagent

## 19 [The relational model for database management: version 2](#)

E. F. Codd

January 1990 Book

Publisher: Addison-Wesley Longman Publishing Co., Inc.

Full text available:  pdf(28.81 MB)Additional Information: [full citation](#), [abstract](#), [references](#), [cited by](#), [index terms](#), [review](#)

### From the Preface (See Front Matter for full Preface)

An important adjunct to precision is a sound theoretical foundation. The relational model is solidly based on two parts of mathematics: firstorder predicate logic and the theory of relations. This book, however, does not dwell on the theoretical foundations, but rather on all the features of the relational model that I now perceive as important for database users, and therefore for DBMS vendors. My perceptions result from 20 y ...

## 20 [Evaluating multiple attribute items using queries](#)



Vijay S. Iyengar, Jon Lee, Murray Campbell

October 2001

**Proceedings of the 3rd ACM conference on Electronic Commerce EC '01**

Publisher: ACM Press

Full text available:  pdf(173.25 KB)Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

The task of evaluating and ranking items with multiple-attributes appears in many guises in commerce. Examples include evaluating responses to a request for quotes (RFQ) for some item and comparison shopping for an item within one or more catalogs. This task is straightforward if the value of the item can be explicitly specified by the evaluator as a function of the attribute values. However, a typical evaluator may not be able to provide the value function in explicit form. In contrast, it is i ...

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## » Key

IEEE JNL IEEE Journal or Magazine

IET JNL IET Journal or Magazine

IEEE CNF IEEE Conference Proceeding

IET CNF IET Conference Proceeding

IEEE STD IEEE Standard

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- ☐ 1. Optimal packet size via marginal utility image compression and expansion delay minimization and theater missile defense: congestion controlled combination protocol  
Niznik, C.A.;  
[Military Communications Conference Proceedings, 1999. MILCOM 1999. IEEE](#)  
Volume 1, 31 Oct.-3 Nov. 1999 Page(s):266 - 270 vol.1  
Digital Object Identifier 10.1109/MILCOM.1999.822685  
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- ☐ 2. Nash equilibria in competitive societies, with applications to facility location, traffic routing :  
Vetta, A.;  
[Foundations of Computer Science, 2002. Proceedings. The 43rd Annual IEEE Symposium on](#)  
16-19 Nov. 2002 Page(s):416 - 425  
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Hershberger, J.; Suri, S.;  
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Potkonjak, M.; Rabaey, J.M.;  
[Acoustics, Speech, and Signal Processing, 1995. ICASSP-95., 1995 International Conference on](#)  
Volume 4, 9-12 May 1995 Page(s):2639 - 2642 vol.4  
Digital Object Identifier 10.1109/ICASSP.1995.480103  
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Joseph, R.D.; Kelly, P.M.; Viglione, S.S.;  
[Proceedings of the IEEE](#)  
Volume 51, Issue 8, Aug. 1963 Page(s):1098 - 1118  
[AbstractPlus](#) | Full Text: [PDF](#)(3498 KB) IEEE JNL

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Rajvaidya, P.; Almeroth, K.C.;

[Parallel Processing, International Conference on, 2001.](#)

3-7 Sept. 2001 Page(s):545 - 552

Digital Object Identifier 10.1109/ICPP.2001.952102

[AbstractPlus](#) | Full Text: [PDF](#)(936 KB) IEEE CNF[Rights and Permissions](#)**7. Strategies for the accreditation of an air-to-air situationally interactive combat model (SICM)**

Hall, D.R.; Betts, F.C.;

[Aerospace and Electronics Conference, 1994. NAECON 1994...Proceedings of the IEEE 1994 Nat](#)

23-27 May 1994 Page(s):953 - 959 vol.2

Digital Object Identifier 10.1109/NAECON.1994.332937

[AbstractPlus](#) | Full Text: [PDF](#)(552 KB) IEEE CNF[Rights and Permissions](#)**8. An air-to-air Situationally Interactive Combat Model (SICM)**

Hall, D.R.; Betts, F.C.;

[Aerospace and Electronics Conference, 1994. NAECON 1994...Proceedings of the IEEE 1994 Nat](#)

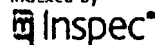
23-27 May 1994 Page(s):960 - 967 vol.2

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A method for resource allocation where only a **marginal utility** is known, comprising the steps of: determining an initial **step size**; evaluating **step size** ...

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While this appears to be a **step** in the right direction, this being the Bush ... On the truck side, which we visited in 2005, this amounts to **size**-based ...

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There is an entire body of literature on **step size** selection, ... In most applications, you should not allow the **step size** to be smaller than 0.1, ...

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In this approach, agents report their **marginal utility** (for having a certain amount of .... For sufficiently small values of the **step-size** parameter,  $\alpha$ , ...

[www.ingentaconnect.com/content/bpl/coin/2007/00000023/00000001/art00007?](http://www.ingentaconnect.com/content/bpl/coin/2007/00000023/00000001/art00007?crawler=true)

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Finally, as the third **step**, if during a certain time interval the **marginal utility** of SEQ list is higher than that of RANDOM list, then the desired **size** is ...

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Effects of Variations in **Size**. The equation for marginal probability (or **marginal utility**) of a vote commitment, men, has implications for behavior as a ...

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To be able to express constant **marginal utility** in terms of the .... The first **step size** differs significantly between the two sequences both by the paired ...

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